

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>BT/3-22351</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP2004/013252</b>	International filing date (day/month/year) <b>22/11/2004</b>	(Earliest) Priority Date (day/month/year) <b>02/12/2003</b>
Applicant  <b>CIBA SPECIALITY CHEMICALS WATER TREATMENTS LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**STRAIN OF RHODOCOCCUS RHODOCHROUS NCIMB 41164 AND ITS USE AS PRODUCER OF NITRILE HYDRATASE**

**5. With regard to the abstract,**

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regard to the drawings,**

- a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N9/88 C12N1/20 C12P13/02 C12R1/01

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12P C12R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>EP 0 362 829 A (YAMADA, HIDEAKI; NITTO KAGAKU KOGYO KABUSHIKI KAISHA)  11 April 1990 (1990-04-11)  cited in the application  abstract  page 5, line 12 - line 26  page 5, line 46 - line 56; claims 1,3,4;  examples 1-e; tables 1,2  -----  -/--</p>	1-31

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

3 February 2005

Date of mailing of the international search report

17/02/2005

Name and mailing address of the ISA

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Mossier, B

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>PRECIGOU S ET AL: "Rapid and specific identification of nitrile hydratase (NHase)-encoding genes in soil samples by polymerase chain reaction" FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, vol. 204, no. 1, 2001, pages 155-161, XP002248648 ISSN: 0378-1097 abstract page 160, column 2, paragraph 1; figures 1,3,4; tables 1,2</p>	1-31
Y	<p>WATANABE I ET AL: "SCREENING, ISOLATION AND TAXONOMICAL PROPERTIES OF MICROORGANISMS HAVING ACRYLONITRIL-HYDRATING ACTIVITY" AGRICULTURAL AND BIOLOGICAL CHEMISTRY, JAPAN SOC. FOR BIOSCIENCE, BIOTECHNOLOGY AND AGROCHEM. TOKYO, JP, vol. 51, no. 12, 1987, pages 3193-3199, XP001062886 ISSN: 0002-1369 abstract page 3195, column 1, paragraph 2; tables 1,3,4</p>	1-31
Y	<p>US 3 281 247 A (MIESCHER GUIDO M) 25 October 1966 (1966-10-25) column 2, line 18 - line 37 examples 1,2</p>	13-31
A	<p>US 5 827 699 A (YANENKO ET AL) 27 October 1998 (1998-10-27) cited in the application column 1, line 39 - line 63 column 4, line 20 - line 59; claim 4</p>	1-31
A	<p>KOBAYASHI M ET AL: "CLONING, NUCLEOTIDE SEQUENCE AND EXPRESSION OF ESCHERICHIA COLI TWO COBALT-CONTAINING NITRILE HYDRATASE GENES FROM RHODOCOCCUS RHODOCHROUS J1" BIOCHIMICA ET BIOPHYSICA ACTA . GENE STRUCTURE AND EXPRESSION, ELSEVIER, AMSTERDAM, NL, vol. 1129, no. 1, 2 December 1991 (1991-12-02), pages 23-33, XP000653047 ISSN: 0167-4781 abstract page 32, column 1, paragraph 1</p> <p style="text-align: center;">-/--</p>	1-31

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>IKEHATA O ET AL: "PRIMARY STRUCTURE OF NITRILE HYDRATASE DEDUCED FROM THE NUCLEOTIDE SEQUENCE OF A RHODOCOCCUS-SP AND ITS EXPRESSION IN ESCHERICHIA-COLI" EUROPEAN JOURNAL OF BIOCHEMISTRY, BERLIN, DE, vol. 181, no. 3, 1989, pages 563-570, XP009033346 ISSN: 0014-2956</p> <p>-----</p>	
A	<p>INGVORSEN K ET AL: "MICROBIAL HYDROLYSIS OF ORGANIC NITRILES AND AMIDES" CIBA FOUNDATION SYMPOSIUM, AMSTERDAM, NL, vol. 140, 1988, pages 16-31, XP000881167 ISSN: 0300-5208</p> <p>-----</p>	

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 24-31 (complete); 13-23 (partially)

Invention 1 concerns the micororganism Rhodococcus rhodochrous strain NCIMB 41164 and the subject-matter relating thereto.

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2. claims: 13-23 (partially)

Invention 2 concerns a method for improving the biocatalytic activity of a microorganism and the subject-matter relating thereto, as far as not covered by Invention 1.

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/013252

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/013252

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0362829	A	11-04-1990	JP 2029079 C	19-03-1996
			JP 2227069 A	10-09-1990
			JP 7053104 B	07-06-1995
			JP 2029072 C	19-03-1996
			JP 2100674 A	12-04-1990
			JP 7053103 B	07-06-1995
			AR 241936 A1	29-01-1993
			AT 124992 T	15-07-1995
			AU 622489 B2	09-04-1992
			AU 4257389 A	12-04-1990
			CN 1041782 A ,C	02-05-1990
			CZ 8905621 A3	16-02-1994
			DE 68923419 D1	17-08-1995
			DE 68923419 T2	04-01-1996
			EP 0362829 A2	11-04-1990
			ES 2076944 T3	16-11-1995
			KR 187512 B1	01-04-1999
			PL 161863 B1	31-08-1993
			SU 1838408 A3	30-08-1993
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			DD 298659 A5	05-03-1992
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			DE 1492868 A1	15-01-1970
			FR 86744 E	01-04-1966
			GB 1078038 A	02-08-1967
			NL 6413933 A	17-06-1965
US 5827699	A	27-10-1998	RU 2053300 C1	27-01-1996
			AU 675379 B2	30-01-1997
			AU 1428195 A	10-07-1995
			CA 2155635 A1	29-06-1995
			DE 4480132 C2	13-03-1997
			DE 4480132 T0	09-05-1996
			FI 953865 A	12-09-1995
			GB 2290295 A ,B	20-12-1995
			KR 131276 B1	11-04-1998
			WO 9517505 A1	29-06-1995